

DWS EST.

A method of forming a cutting die comprising the steps of:
cladding a blade material onto a die surface to form a blade
extending outwardly from said surface; and
shaping the cladded blade.

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2. A method as in claim 1 wherein said cladding step includes:
heating an area of said die surface ; and
introducing blade material into the heated area and building
a blade of said material outwardly from said surface.

5 3. A method as in claim 2 including heating said area with a
laser.

4. A method as in claim 2 including introducing cladding
powder into the heated area for building said blade.

10 5. A method as in claim 2 wherein said shaping step includes
shaping said blade by electrical discharge machining.

6. A method as in claim 2 wherein said shaping step includes
shaping said blade by milling.

7. A method as in claim 2 wherein said shaping step includes
shaping said blade by grinding.

15 8. A method as in claim 1 including the further step of heat
treating said blade.

9. A method as in claim 1 including the further step of cryogenic treating said blade.

Pub E6 10. A method as in claim 1 wherein said cladding step includes:
5 scanning a laser beam along a die surface, in a path corresponding to a desired blade pattern;
melting said die surface along said path; and
introducing metal into said path while heating said path to build up a die blade in said pattern.

11. A method as in claim 10 including heat treating said die
10 blade after said shaping to harden said die blade.

Pub E7 12. A method as in claim 10 wherein said metal introducing step includes introducing cladding powder into said path.

Add C1

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